

Napoli, 30 giugno/1 luglio

ISTEA
ITALIAN SOCIETY OF SCIENCE, TECHNOLOGY
ENGINEERING OF ARCHITECTURE

2016

INTERNATIONAL CONFERENCE
**BACK TO 4.0:
RETHINKING
THE DIGITAL CONSTRUCTION
INDUSTRY**

NAPLES - SS. Marcellino and Festo Historical Complex

SPONSORED BY



IN COLLABORATION WITH



CONFERENCE PROGRAMME

30th JUNE

8,30 CONFERENCE REGISTRATION

OPENING SESSION

- 9,30 WELCOME SPEECH [Maurizio Giugni, University of Naples Federico II, Dean of Department of Civil, Architectural and Environmental Engineering]
9,50 OPENING REMARKS [Angelo Ciribini, President of ISTeA - Roberta Vitale, President of ANCE GiovanI]
10,30 DIGITAL STRATEGIES AND GOVERNMENTAL MANDATES
Elisa Grande, Head of Legislative Office of the Ministry of Infrastructure and Transport
11,00 COFFEE BREAK
11,30 PREDICTIVE AND COGNITIVE BUILDINGS AND INFRASTRUCTURES
Claire Penny, IBM, Worldwide Solution Leader for BIM & IOT
12,20 THE 4.0 PARADIGM AND THE CONSTRUCTION INDUSTRY
Volker Krieger, Head of BIM, Lab Planning, MENA Projects at Fact GmbH
13,10 DISCUSSION
13,40 LIGHT LUNCH

2nd SESSION: Energy

- 14,40 THE THERMAL INSULATION OF STIFERITE FOR SUSTAINABLE AND ZERO CONSUMPTION BUILDINGS BY STIFERITE s.r.l.
F. Raggiotto
15,00 Energy management of the smart city through information systems and models
A. Pasquinelli, L. C. Tagliabue, E. De Angelis, F. Guzzetti, A. Ciribini
15,10 Nearly zero energy multifunctional modules for public use
M. Caini, R. Paparella
15,20 Earthworks fuel consumption in residential building projects
B. Bossi, M. L. Trani
15,30 Integration of BIM-GIS systems for energy-efficient hospital buildings. The Streamer research and the case study of the Careggi Polyclinic (Florence)
L. Marzi, R. Di Giulio, B. Turillazzi, F. Terzaghi, A. Giuntini
15,40 5D BIM for construction site surveying
M. L. Trani, M. Cassano, S. L. Cavalli Pontiroli, G. Zoia
15,50 COFFEE BREAK

3rd SESSION: Building Performance Engineering

- 16,20 USE OF DRONES FOR BUILDINGS: FLIGHT DEMONSTRATION IN THE CLOISTER BY ISARAIL S.p.A.
16,30 UAV application for buildings monitoring
E. Miraglia
16,50 Performance analysis of Model Predictive Control for the thermal control of buildings
M. Lemma, M. Luzia, A. Carbonari, M. Vaccarini
17,00 Vapour barriers or whole building hygrothermal design? When using the standards may yield to building pathologies
R. Paolini, T. Poli
17,10 Predicting energy performance of an educational building through artificial neural network
F. Re Ceconi, L.C. Tagliabue, A. L. C. Ciribini, E. De Angelis
17,20 Empirical approach for estimating reduced-order models of buildings
M. Benedettelli, B. Naticchia, A. Carbonari, M. Vaccarini
17,30 Normalized Total Global Cost for environmental sustainability assessments: a BIM approach

F. Iannone, A. Pavone, L. Ferrante

17,40 VPL for Building Performance Simulation: a case study in light analysis

C. Zanchetta, R. Paparella

17,50 Digital information and hedonic models to improve decision making processes (BIM-GIS)

A. Pavan, C. Mirarchi

18,00 ISTEa SHAREHOLDERS' MEETING

19,00 EXCLUSIVE VISIT TO S. SEVERO CHAPEL AND *CRISTO VELATO*

20,00 DEPARTURE OF PULLMANS FOR GALA DINNER IN VILLA DOMI (20,00)

1ST JULY

4th SESSION: Building Information Management & Information and Communications Technology

9,30 Integrating real-time information in BIMs for building sustainability in operational stage

D. Pasini, B. Daniotti

9,40 Multi-scale integrated assessment of existing building assets through BIM

V. Leggieri, G. Uva, F. Iannone

9,50 HBIM-AIDED refurbishment process of cultural heritage

S. Bruno, M. De Fino, F. Fatiguso

10,00 Definition of a WBS methodology building-element and IFC relations dependent

C. Zanchetta, P. Borin, P. Scarparo

10,10 Interoperability for building process. Model and Method.

L. M. Papa, M. Nicolella, P. D'Agostino

10,20 From BIM to BEM for the management of the existing school buildings

G. M. Di Giuda, V. Villa, F. Paleari

10,30 LOD

G. M. Di Giuda, V. Villa, L. Loreti

10,40 BIM and database integration for asset management optimisation

G.M. Di Giuda, M. Dejaco, S. Maltese, V. Villa

10,50 Digital communication platform between man and machine

M. Ferrari

11,00 Adaptive Manufacturing: a new perspective for construction industry

I. Paoletti

11,10 Digitally enabled project management strategies. Managing risk to support digital transition of construction industry

M. Bonanomi, C. Talamo, G. Paganin

11,20 COFFEE BREAK

5th SESSION: Sustainability

11,50 TECHNOLOGICAL INNOVATION AND SUSTAINABILITY OF CONSTRUCTION PRODUCTS BY LINVEA s.r.l.

12,10 The innovative and environmentally friendly construction techniques. The house of wood and straw

F. Fascia, F. Sannino, E. La Mantia

12,20 Window sustainability assessing tools

E. Antoniol

12,30 Requalification of the Tobacco Factory in Palermo with destination to social finalities

S. Pennisi

12,40 The educational building in the circular economy: an extended concept of asset quality

L. C. Tagliabue, L. Consalez, A. L. C. Ciribini, S. Mastrolembo Ventura

12,50 Sustainability for emergency and reception

R. Caponetto

13,00 Relational synergy in the strategy of environmental systems and in the innovation of the culture of sustainability

M. Di Marzo, D. Forenza

13,10 LIGHT LUNCH

6th SESSION: Design and consultancy management & Models for design and construction

14,10 A Process Map for managing façade retrofit

E. Seghezzi, G. Maserà

14,20 Airport planning and design. The airport projects development within the Italian regulatory framework

M.A. Esposito, E. Fossi

14,30 Performative ceramics: 3D printing for architecture

P. Cascone, A. Giglio, E. Ciancio, F. Galdi

14,40 Renovation of historic buildings with demountable and deployable systems: the case of Sant'Agostino Monastery in Bergamo

A. Pizzigoni, G. Ruscica

14,50 Behavioural design for building construction: from human behaviours to smart spaces

G. Bernardini, E. Quagliarini, M. D'Orazio

15,00 Parametric configuration and comfort parameters for dynamic learning spaces

V. Villa, L. C. Tagliabue, G. M. Di Giuda, A. L. C. Ciribini, L. Loreti

15,10 Transforming learning spaces: preschool and primary school buildings in Italy

P. Fiore, P. Carullo

15,20 Lean mindset integration for the improvement of Airport design process

F. Bosi, M. A. Esposito, R. Sacks

15,30 Building Information Modeling and Gamification for educational facilities

S. Mastrolembo Ventura, D. Simeone, D. Ghelfi, E. Oliveri, A. L. C. Ciribini

15,40 COFFEE BREAK

7th SESSION: Life Cycle Management & Project construction and integrated system management

16,10 HOLOBUILD: process optimization by the introduction of Mixed Reality in construction site

F. L. Rossini, G. Novembri, A. Fioravanti, C. Insola

16,20 Hypothesis for an application of the Factor Method to reinforced concrete

M. Nicolella, C. Scognamillo

16,30 LCA data structure analysis for BIM applications

C. Cavaliere, G. R. Dell'Osso, A. Pierucci

16,40 Application of the of the depreciation cost approach in the choice of the maintenance strategies

V. Del Giudice, P. De Paola, M. Nicolella, A. Pino

16,50 The effects of a saline environment on the durability of commercial photocatalytic paints

D. Enea, G. Alaimo, P. Scalisi

17,00 Adding construction workspace modeling and planning to a 4D BIM-based simulation model

V. Getuli, G. Peretoli, T. Sorbi, P. Capone

17,10 Construction health and safety code checking: a BIM-based validation process

S. Mastrolembo Ventura, V. Getuli, P. Capone, A. L. C. Ciribini

17,20 A planning and scheduling paradigm for construction strategy of a building rehabilitation project

M.A. Bragadin, K. Kähkönen

17,30 BIM and Multi-Agent Distributed Constraint Optimization

G. Novembri, A. Fioravanti, F. L. Rossini, C. Insola

CONCLUSIONS